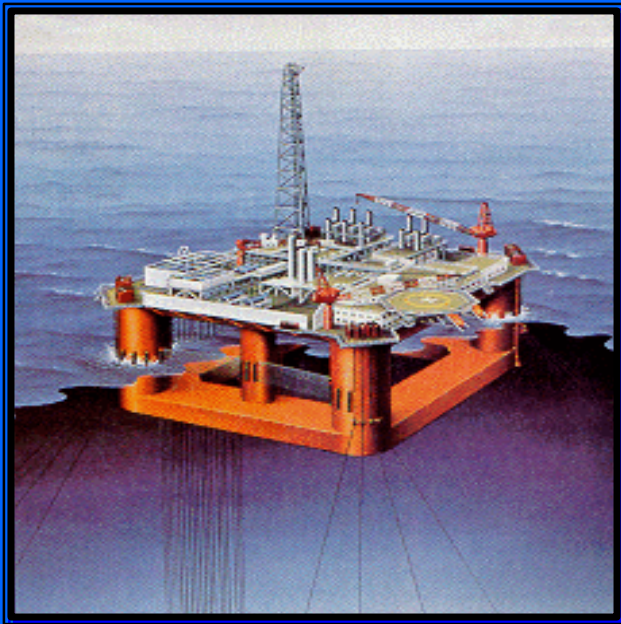


# Technology Assessment and Research Program



# Technology Assessment and Research (TAR)

- Operations Safety and Engineering Research (OSER)
- Oil Spill Response Research (OSRR)



# TAR Program Objectives

## *Identify and Fund Research Projects:*

- Provide Direct Technical Support for MMS Regulatory Decisions
- Review Industry Innovations and Ensure Regulatory Compliance
- Catalyst for Industry Research - Operational Safety and Oil Spill Prevention and Clean Up Capabilities
- Support International Cooperation in Operational Safety and Oil Spill Prevention and Clean Up Capabilities.

# FY 2002 - Funding Appropriations

TAR	\$885,000
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OTRC	\$899,000
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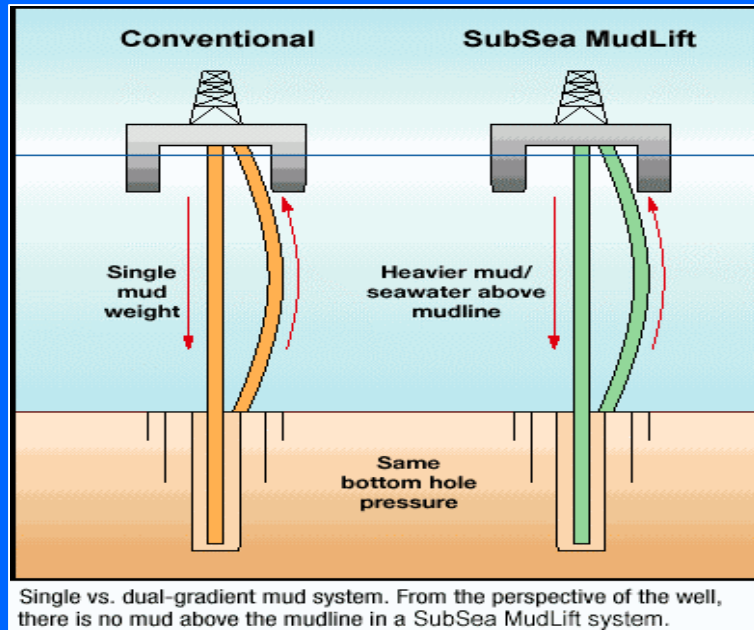
OPA-90	<u>\$3,115,000</u>
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	\$4,899,000
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# Factors Influencing MMS Research 2002 and Beyond

- Technology
- Operating Environments
  - Deep Water Marine
  - Arctic
- Aging Infrastructure
- Regulatory Support

# Drilling, Workovers & Completions



# 319 - Reliability of Blowout Preventor Systems  
-Deepwater -- Phase II  
(*SINTEF*)

# 382 - Experimental Validation  
Well Control Procedures  
-Deepwater (*Petrobras*) \*

# 383 - Performance of Deepwater BOP Equipment during  
Well Control Events (*SINTEF*)

# 384 - Deepwater Riser Wear Technology (*Maurer*) \*

# 386 - Deepwater Dual-Density Drilling Workshop (*Maurer*)

# Drilling, Workovers & Completions

# 412 - Underbalanced Drilling Training for MMS  
Drilling Engineers (*Maurer*)

# 426 - Long Term Integrity of Deepwater Cement Systems  
(*Cementing Solutions, Inc.*) \*



# Production



# 275 - Riser Reliability Analysis  
(*Risk Engineering, Inc.*) \*

# 280 - Risk Assessment Dry Tree  
Tie-Back Alternatives  
Study (*Aker*)

# 284 - Investigation of Hybrid Deepwater Production  
Systems (*LSU*) \*

# 305 - Highly Compliant Rigid-Pipe Riser Analysis  
(*PMB Engineering*) \*

# 331 - Lifetime Cost of Subsea Production Systems (*DNV*) \*

# 393 - Lifecycle Cost Model Subsea Multiphase Operations  
(*DNV*) \*



# Structures / Materials



# 388 - Fire and Blast Information Group (FABIG) (*Steel Construction Institute*) \*

# 389 - Characterizing Polyester Rope Installation Damage (*Stress Engineering Services*)

# 399 - International Workshop on Fire & Blast Engineering for Offshore Industry (*MSL*) \*

# 437 - Reliability Analysis of Deepwater Anchors (*DNV*)

# Pipelines / Pipeline Operations



# 335 - Assessment of Spans in Existing Submarine Pipelines (*BOMEL Ltd.*) \*

# 414 - Finite Element Analysis of Pipe / Soil Interaction (*C-Core*) \*

# 430 - International Offshore Pipeline Workshop 2003 (*Project Consulting Services, Inc.*) \*

# 434 - Strain-Based Design of Pipelines (*Edison Welding Institute*) \*

# Decommissioning



# 270 - Decommissioning of Oil and Gas Facilities Offshore  
California Workshop  
(*UCSB*)

# 352 - Assess Current Pipeline  
Flushing &  
Decommissioning  
Requirements (*WINMAR*)

# 372 - State of the Art Removing Large Platforms Deepwater  
(*Twachtman, Snyder and Byrd, Inc.*)

# 397 - Severe Slugging Elimination Ultra-Deepwater  
Tiebacks and Risers (*University of Tulsa*) \*



# Risk Assessment / Human & Organizational Factors



# 283 - Comparative Evaluation of minimum Structures and Jackets (*WS Atkins*) \*

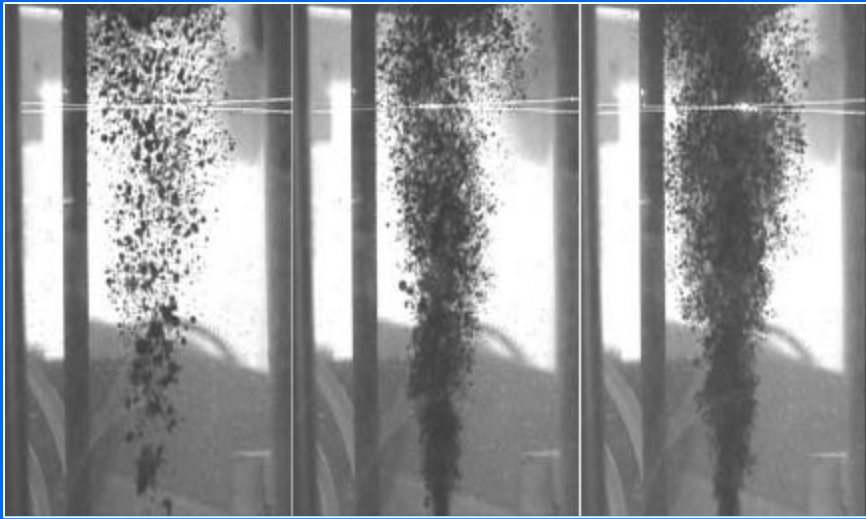
# 327 - Applied Gas Hydrate Research Program (*Texas A&M*) \*

# 329 - Risk Assessment of Temporarily Abandoned or Shut-in Wells (*C-FER*)

# 401 - 2nd International Workshop on Human Factors in Offshore Operations (*RRS Engineering*) \*

# 426 - Long Term Integrity of Deepwater Cement Systems (*Cementing Solutions, Inc.*) \*

# Deepwater Releases / Behavior



# 324 - Analytical Study of Multi-phase Plumes in a Stratified Ocean with application to Deep Ocean Spills (*UH/MIT*) \*

# 355 - Satellite Imagery to Detect Leaking Abandoned Wells on the U.S. OCS (*Advanced Resources International*)

# 377 - Project Deep Spill (*SINTEF*) \*

# Alternative Response Countermeasures



# 259 - Laboratory Testing to Determine Operational Parameters for In Situ Burning of U.S. OCS Crude Oil Spills (*S.L. Ross*)

# 287 - Fate and Behavior of Deep water Subsea Oil Well Blowouts in the Gulf of Mexico (*S.L. Ross*)

# 311 - Oil Spill Containment, Remote Sensing, & Tracking Deepwater Blowouts: Status of Existing & Emerging Technologies (*PCCI*)

# 427 - Dispersant Effectiveness Test - Protocol for OHMSETT (*S.L. Ross*)

# Texas A&M and University of Texas



**MMS**



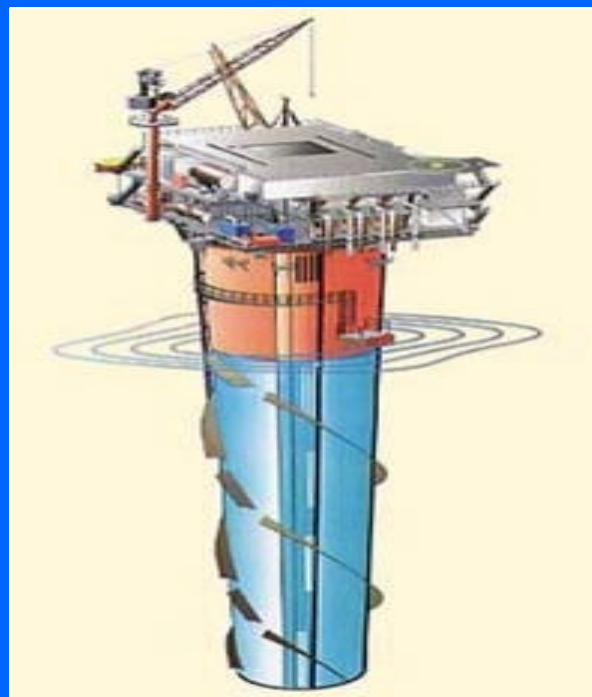
# OTRC

## Mission

- Conduct Basic Engineering Research and Test Technology for Deepwater Oil and Gas Production
- Educate engineering students for the offshore industry

## Principal Research Focus Areas

- Fluid / Structure Interaction
- Materials
- Seafloor Engineering



# FPSO



# 359 - Comparative Risk Analysis of Deepwater Production Systems

# 368 - Response of Tanker Based FPSO to GOM Hurricanes

# 406 - FPSO Roll Motions

# 441 - Physical and Numerical Modeling of Green Water on FPSO's

# Geotechnical



# 362 - Deepwater Anchor Reliability

# 421 - Slope Stability

# 422 - Earthquake Assessment of  
Subsea Facilities in the GOM

# General



- Technology Assessment of Alternatives for Handling Associated Gas Produced from Deepwater Oil Developments in the Gulf of Mexico
- Comparative Risk Analysis for a SPAR Based Storage of Hydrocarbons
- ROV / AUV Capabilities for Deepwater Facilities



# MMS TA&R Program

[WWW.MMS.GOV/TARPHOME](http://WWW.MMS.GOV/TARPHOME)

